

WESTCOTT  
Appl. No. 10/500,623  
August 1, 2006

**AMENDMENTS TO THE DRAWINGS**

Please substitute the attached Figure 1 for the originally submitted Figure 1.

**REMARKS/ARGUMENTS**

Claims 1-26 and 28-34 stand rejected, with claim 27 objected to in the outstanding Official Action. Applicant has cancelled without prejudice claims 2-5, 7, 8 and 11 and amended claims 1, 6, 9-11, 13, 14, 19, 20 and 22. Therefore, claims 1, 6, 9-11 and 13-34 are the only claims remaining in this application.

The Examiner's acknowledgment of Applicant's claim for foreign priority and receipt of the certified copy of the priority document is very much appreciated. Additionally, the Examiner's consideration of the prior art previously submitted with Applicant's Information Disclosure Statement is very much appreciated.

Figure 1 is objected to as failing to indicate that it is "prior art." Applicant encloses a substitute sheet of drawing with a corrected Figure 1 including the appropriate legend. Consideration and entry of the substitute drawing is respectfully requested.

Claims 1-7, 13, 14, 17-25 and 28 stand rejected under 35 USC §102 as anticipated by Wilcox (U.S. Patent 5,847,554). Although the subject matter of claim 8 has been incorporated into claim 1, thereby obviating the rejection of claims 1-7 under 35 USC §102, the rejection of claims 13, 14, 17-25 and 28 as being anticipated by Wilcox remains in force. Applicant submits that Wilcox does not teach the method of claim 13, i.e., a method of operating a switching circuit.

Applicant's claim 13 specifically indicates receipt of a voltage demand signal (step (a)), generating first and second switching signals (step (b)) and applying the first and second switching signals to first and second switches respectively during the period (step (c)), such that the desired electrical voltage is supplied to the output during the period of operation.

Wilcox is believed to use voltage measurement only for determining the current flow through a load and thereby avoiding the need for a lossy current sensor (typically a resistor coupled in series with the load). Wilcox does not teach any measurement of the supply voltage or using first and second switching signals so that the average voltage of the electrical signals applied to the output is substantially equal to the desired voltage. Should the Examiner be of the opinion that Wilcox does teach the method steps recited in claim 13 combined so as to provide the recited benefit, he is respectfully requested to identify by column and line number that portion of the Wilcox reference containing any such disclosure. Absent a detailed indication of where Wilcox teaches the method steps of claim 13, any further rejection of claims 13, 14, 17-25 and 28 is respectfully traversed.

Claims 8-11 and 30-32 stand rejected under 35 USC §103 as unpatentable over Wilcox in view of Dyer (U.S. Patent 4,585,986). Inasmuch as the subject matter of claim 8 has been incorporated into amended claim 1, Applicant will treat the rejection as an obviousness rejection of claim 1 and all claims dependent thereon.

The Examiner's admission that Wilcox "does not disclose that the switching circuit comprises a bridge circuit, and first and second arms having first and second switches respectively, the first and second arms being connected to opposed ends of the output" is very much appreciated. The Examiner contends that the Dyer reference teaches Applicant's claimed bridge arrangement. Assuming for the purposes of argument only the Examiner's analysis is correct, there is simply no reason why one of ordinary skill in the art would combine the Dyer and Wilcox references. Neither reference contains any suggestion that measurements of the DC

supply voltage would be necessary, and indeed Wilcox seems to suggest measurement of the current flow is the only measurement necessary.

The Court of Appeals for the Federal Circuit has held in the case of *In re Rouffet*, 47 USPQ2d 1453, 1457-8 (Fed. Cir. 1998) that

to prevent the use of hindsight based on the invention to defeat patentability of the invention, **this court requires the examiner to show a motivation** to combine the references that create the case of obviousness. In other words, **the Examiner must show reasons** that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. (emphasis added).

As noted above, neither Wilcox nor Dyer are directed to the problem solved by Applicant's claimed invention, i.e., precise voltage regulation from a voltage supply where the regulated voltage output comprises pulses of nominally  $+V_s$ , 0V and  $-V_s$ . Should the Examiner believe otherwise, he is respectfully requested to point out where in the Wilcox and/or Dyer references there is any "reason" or "motivation" for combining portions of the two references, especially when combined in the manner of Applicant's independent claims and claims dependent thereon. Absent a detailed indication of how or why there is a suggestion or motivation for combining the references, any further rejection of independent claim 1 and claims dependent thereon, as well as dependent method claims 30 and 32, is respectfully traversed.

Claims 12, 15, 16 and 29 stand rejected under 35 USC §103 as unpatentable over Wilcox in view of Smedley (U.S. Patent 5,559,467). Inasmuch as claim 12 has been cancelled, the rejection thereunder has been obviated. Claims 15, 16 and 29 ultimately depend from claim 13 and therefore the above comments regarding the Wilcox reference and claim 13 are herein incorporated by reference.

The Examiner's admits that "Wilcox does not disclose that the switching circuit comprises a noise shaper operable to noise-shape the first and second signals." This admission is very much appreciated. The Examiner contends it would be obvious to combine Wilcox and Smedley, although no "reason" or "motivation" has been identified for such combination.

It is noted that a conclusory statement that it would be obvious to combine the references does not meet the Federal Circuit requirement of the Examiner identifying some "reason" or "motivation" for combining elements from two separate references, even if the references are in analogous arts. Should the Examiner believe Smedley and Wilcox to contain some reason or motivation for combining elements of the two separate references, especially combining them in the manner of Applicant's claims 12, 15, 16 and 29, he is respectfully requested to identify those disclosures. Absent such identification, any further rejection of claims 12, 15, 16 and 19 over the Wilcox/Smedley combination is respectfully traversed.

Claims 26, 33 and 34 stand rejected under 35 USC §103 as unpatentable over Wilcox in view of Ramarathnam (U.S. Patent 6,316,895). Inasmuch as claim 26 ultimately depends from claim 13, the above comments with respect to the Wilcox reference and claim 13 are herein incorporated by reference. The Examiner's admission that Wilcox does not "disclose that the step of generating the first and second switching signals according to a rule that any pulse should be positioned symmetrically about the centre of the period" is very much appreciated.

While the Examiner alleges that Ramarathnam discloses such symmetric pattern of switching signals, the Examiner has provided no "reason" or "motivation" for combining these references. Merely stating a conclusory opinion that it would be obvious to combine method steps and/or structures is not a sufficient disclosure of a "reason" or "motivation" for combining

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references. Any further rejection of claims 26, 33 and 34 under 35 USC §103 over the Wilcox/Ramarathnam combination is respectfully traversed.


The Examiner's indication of allowable subject matter in claim 27 is very much appreciated. However, at present, Applicant believes that claim 27 is dependent from allowed claims (claim 26, claim 25, claim 23 and claim 13) and therefore it is unnecessary to rewrite claim 27 in independent form at this time. However, the indication of allowable subject matter is very much appreciated.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that remaining claims 1, 6, 9-11 and 13-34 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicant's undersigned representative.

Respectfully submitted,

**NIXON & VANDERHYTE P.C.**

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